

# IOT-GATE- RPI4



## Processor

CPU	Broadcom BCM2711, quad-core ARM Cortex-A72, 1.5GHz	+
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## Memory and Storage

RAM	1GB – 8GB, LPDDR4	D
Primary Storage	16GB - 128GB eMMC flash, soldered on-board	NA
Secondary Storage	64GB - 256GB NVME flash, optional module	NB

## Display and Graphics

Display Output	DVI-D, up to 4Kp60	+
GPU	Broadcom VideoCore VI H.265 (4Kp60 decode), H.264 (1080p60 decode, 1080p30 encode)	+

## Network

LAN	1000Mbps Ethernet port, RJ45 connector	+
	100Mbps Ethernet port, RJ45 connector	+
WiFi	802.11ac WiFi interface	WB
Bluetooth	Bluetooth 5.0 BLE	WB
Cellular	4G/LTE CAT4 cellular module, Quectel EC25-E (EU bands) * via mini-PCIe socket	JEC25E
	4G/LTE CAT4 cellular module, Quectel EC25-A (US bands) * via mini-PCIe socket	JEC25A
GNSS	SIM card socket	+
	GPS Implemented with Quectel EC25 module	JEC25x

## I/O

USB	3x USB2.0 ports, type-A connectors	+
	2x USB3.0 ports, type-A connectors Implemented with expansion add-on board * cannot be combined with NVME storage	FUSB3 FUSB3 FUSB3
RS485	Up-to 4x RS485 (half-duplex)   RS232   CAN-FD ports Isolated, terminal-block connector	Fx Fx
CAN bus		
RS232		
Digital I/O	Up-to 2x I/O modules each supporting 4x digital outputs + 4x digital inputs	Fx
	Isolated, 24V compliant with EN 61131-2, terminal-block connector	Fx
Debug	1 x serial console via UART-to-USB bridge, micro-USB connector	+
Expansion Connector	Expansion connector for add-on boards	+
	PCIe, USB, SPI, GPIOs	+

## System

Security	Secure boot, implemented with i.MX8M Mini HAB module TPM 2.0, implemented with Infineon SLB9670	+ FATPM
RTC	Real time clock operated from on-board coin-cell battery	+

## Electrical Specifications

Supply Voltage	Unregulated 8V to 36V
Power Consumption	2W - 7W, depending on system load and configuration

## Mechanical Specifications

Dimensions	112 x 84 x 25 mm
Enclosure Material	Aluminum housing
Cooling	Passive cooling, fanless design
Weight	450 gram

## Compliance

Regulatory	CE, FCC
EMC	EN 55032/5, EN 61000-6-2, EN 61000-6-3
Safety	EN/UL/IEC 62368-1
Cellular	PTCRB * with SIM7600A modem

## Reliability and Environmental

MTTF	> 200,000 hours
Warranty	5 years
Operation Temperature	Commercial: 0° to 60° C Extended: -20° to 60° C Industrial: -40° to 80° C
Storage Temperature	-40° to 85° C
Relative Humidity	10% to 90% (operation) 05% to 95% (storage)